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ABSTRACT

The Unesco report, one in a series, examines education in Thailand. It studies the general framework of information systems within the Ministry of Education, assesses the availability and use of information for decision making in planning and curriculum development and identifies the problems concerning the information system. There are four chapters. In Chapter One the information system within the Ministry of Education is analyzed in terms of internal and external sources of information, carriers of information, information flows, methods of structuring of information, and impact of information. With reference to sources of information, external information does not have much impact on grass roots decision making. Parents' groups and the mass media have not yet developed too keen an interest in educational matters. A system which collects and organizes foreign information is needed. In Chapter Two, an analysis of the process of educational development planning for the period 1977-81 illustrates the decision-making structure involving different agencies concerned with formal and non-formal education. In the interaction process among key decision makers, politics did play a significant role in planning. In Chapter Three, an analysis of the curriculum development process illustrates participatory decision making in pedagogic matters, which involved many committees and working groups. Chapter four contains the report's conclusions. (Author/RM)

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THE USE OF INFORMATION IN DECISION-MAKING FOR EDUCATIONAL CHANGE IN THAILAND

by

Dr. Vichai Tunsiri

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FOREWORD

Unesco's General Conference at its 19th session (Nairobi, Kenya, 1976) resolved that the Secretariat give particular attention to "gathering and disseminating information about new educational policies for the renewal of educational systems, adapted to specific needs on the basis of particular social, economic and cultural situations and aimed at promoting democratization of the systems within the framework of life-long education" (Programme Resolution 1.111).

In line with this mandate the Division of Educational Policy and Planning began in 1977 reproducing selected technical papers and distributing them as a series under the general title: "Reports, Studies ...". The aim of this series is to stimulate reflection and discussion on current issues confronting educational policy-makers, planners, administrators and school architects. Distribution is limited to Unesco officials at Headquarters and in the field, as well as interested technical personnel in governmental and private institutions. It is hoped that this series will promote and serve as a vehicle for increasing communication between individuals and institutions concerned with policy and planning aspects of education.

The "Reports, Studies ..." series consists of two sub-series : (i) papers with a subject orientation (numbered S.1, S.2, etc.) and (ii) papers focusing on a given country (numbered C.1, C.2, etc.). Subject papers deal with such topics as educational policies and legislation, planning and management techniques, planning and design of educational space and facilities, the relationship of education to productive work and employment, inter-country cooperation, the role of education in respect of the New International Economic Order, etc. Country papers are either brief profiles of the educational system of a particular country (mainly the LDCs) or treat a specific reform or aspect of the country's educational system.

Some of the papers reproduced in the series are "desk studies" based on information available within Unesco, others were originally prepared as background or discussion papers for a meeting or seminar, while still others are personal position papers representing part of a continuous dialogue within the Unesco Secretariat.

Papers are selected for the series on the basis of their topical interest. Readers should bear in mind that many, if not most, of the papers are working documents, unedited and not intended for public distribution. Some of the authors have written in a language other than their mother tongue, which explains certain linguistic deficiencies. It must also be stressed that the papers present the ideas of their respective author and do not necessarily reflect the policies of Unesco.

The Division of Educational Policy and Planning welcomes comments and suggestions concerning the series and invites readers to make known their reactions to particular ideas presented or to entire papers. In certain cases it may be possible to reproduce such comments and reactions in a subsequent issue of the series. For the convenience of readers who may wish to contact the author of a paper, the current contact address is given whenever possible.

AVANT PROPOS

La Conférence Général de l'Unesco, lors de sa 19e session (Nairobi, Kenya, 1976) a décidé que "la collecte et la dissémination de l'information sur les nouvelles politiques d'éducation pour le renouvellement et la réforme des systèmes d'éducation adaptés aux besoins spécifiques basés sur des situations sociales, économiques et culturelles particulières et qui ont comme objectif la démocratisation des systèmes dans le cadre de l'éducation permanente" (Résolution 1.111 du programme) se situent parmi les objectifs prioritaires de l'Organisation.

Conformément à ce mandat, la Division des politiques et de la planification de l'éducation a entrepris en 1977 la reproduction et la distribution de certains documents techniques, sous le titre général de "Rapports et Etudes ...". Cette série a pour objet de stimuler la réflexion et les discussions portant sur les problèmes courants auxquels doivent faire face les décideurs, les planificateurs et les administrateurs de l'éducation ainsi que les architectes scolaires. La distribution se limite aux professionnels du Siège et hors-Siège, ainsi qu'aux personnels d'institutions gouvernementales ou privées susceptibles de les trouver utiles pour leur travail. Nous espérons que cette série constituera un moyen pour promouvoir et augmenter la communication entre les individus et les institutions concernés par les différents aspects des politiques et de la planification de l'éducation.

Ces "Rapports et Etudes ..." se divisent en deux catégories: (i) les documents qui traitent d'un sujet (numérotés S.1, S.2, etc.) et (ii) les documents qui traitent d'un pays (numérotés C.1, C.2, etc. Les premiers portent sur des sujets tels que les politiques et la législation de l'éducation, les techniques de gestion et de planification, la planification et l'étude des espaces, constructions et équipements éducatifs, la relation entre éducation/travail/emploi, la coopération entre les pays, le rôle de l'éducation par rapport au Nouvel ordre économique international, etc. Les seconds présentent des profils du système éducatif d'un pays donné (principalement les pays les moins développés), ou traitent d'une réforme ou d'un aspect spécifique du système éducatif du pays concerné.

Certains des documents reproduits dans cette série sont des "desk studies" basés sur des informations déjà existantes à l'Unesco, d'autres ont été préparés à l'origine pour servir de documents de base ou de discussion à des réunions ou séminaires, alors que d'autres encore, exprimant les positions personnelles des auteurs, se situent dans le cadre d'un dialogue permanent au sein du Secrétariat de l'Unesco.

Les documents sont choisis pour cette série en fonction de l'actualité du sujet traité. Les lecteurs doivent tenir compte du fait que beaucoup, sinon la plupart, des documents sont des documents de travail inédits et ne sont pas destinés au public. Certains auteurs ont rédigé ces documents dans une langue qui n'est pas la leur, ce qui explique certaines faiblesses linguistiques. Nous voudrions également souligner que les documents expriment les idées de leurs auteurs respectifs et ne reflètent pas nécessairement la politique de l'Unesco.

La Division des politiques et de la planification de l'éducation souhaite recevoir des commentaires ou suggestions au sujet de la série, et demande aux lecteurs de bien vouloir faire part de leurs réactions à certaines idées exprimées ou à des documents dans leur ensemble. Dans certains cas, il sera peut-être possible de reproduire ces commentaires et réactions lors d'une prochaine parution de la série. Les adresses des auteurs des documents sont indiquées afin de donner aux lecteurs qui le désirent la possibilité d'entre en contact avec eux.

RESUME

L'UTILISATION DE L'INFORMATION DANS LA PRISE DE DECISION RELATIVE AU CHANGEMENT DE L'EDUCATION EN THAILANDE

Dans cette publication, l'auteur a tenté d'étudier le cadre général des systèmes d'information dans le Ministère de l'Education en Thaïlande, et d'évaluer les disponibilités et utilisations de l'information dans la prise de décision concernant le développement de la planification et celui des programmes d'études. Elle définit également les problèmes concernant le système d'information.

Les structures de la prise de décision y ont été décrites et l'interaction entre ces structures et le processus d'information y est analysée.

Dans le premier chapitre, l'auteur décrit tout d'abord la structure administrative du système d'éducation thaïlandais et analyse le système d'information du Ministère de l'Education de la façon suivante :

1. Sources d'information, internes et externes.
2. Carrières de l'information, soit pour professionnels, experts ou profanes.
3. Les courants de l'information, les courants descendants et les courants ascendants.
4. Méthodes de structuration de l'information.
5. Impact de l'information, ou interaction entre le système d'information et le processus de la prise de décision.

Dans le deuxième chapitre, une analyse du processus de planification du développement de l'éducation pour la période 1977-81 sert d'illustration à la structure de la prise de décision impliquant plusieurs ministères ou agences concernés par l'éducation formelle et non-formelle. Dans cette analyse, des données essentielles de planification sont mises en valeur selon leur degré de disponibilité, ainsi que leur impact sur la prise de décision.

Dans le troisième chapitre, une analyse du processus de développement des programmes d'études illustre le processus de participation dans la prise de décision en termes pédagogiques. 40 Comités et groupes de travail et 500 personnes de différents niveaux et agences sont concernés.

L'auteur de cette publication est Dr. Vichai Tunsiri, Directeur de la Division de la Recherche en Education, Département des Techniques de l'Education du Ministère de l'Education en Thaïlande.

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Chapter One

An Information System for the Decision-Making process in the Thai Ministry of Education

The decision-making process in the Thai Educational System is difficult to explain. Indeed, it is doubtful if there is one unified decision-making process or structure, since responsibility for different levels of education are invested in different ministries. The information system which should be part and parcel of the decision-making process is extremely complicated. It is indeed a difficult task to talk about the information system for the whole educational system. Attempts, however, will be made to describe the system and process of information flows within the Ministry of Education in this chapter, and to focus on two case-studies of educational development, which involve the whole educational system in chapters 2 and 3. But first of all, an overall decription of the Thai educational administrative system of the Thai education will be made.

The Thai Education Administrative System

The Thai educational administrative system is one of the most peculiar that exists. Responsibility for the administration of education is divided amongst four government ministries, namely: the office of the Prime Minister, the State University Bureau, the Ministry of Interior, and the Ministry of Education. The last is responsible for secondary education, and the pedagogic aspects of the whole system except at the higher level. The Ministry of Interior is responsible for administrative aspects of elementary education. The State University Bureau is a coordinating body for all universities. The National Education Commission, under the office of the Prime Minister is responsible for designing the national education scheme and the educational development plan. Thus, no single ministry is responsible for the entire educational system, The Ministry of Education is sometimes scathingly called the Ministry of Secondary Education. Thus, any change, let alone a reform of the education system is always a difficult task, requiring a compromise of ideas, principles and interests of the four decision-making systems concerned. An analysis of the interaction amongst the four systems in the process of education development will be made in Chapters 2 and 3. For the present introductory chapter, it will serve our purposes to focus chiefly on the information system of the Ministry of Education.

The Ministry of Education is divided for administrative purposes into 10 departments, each department is divided into divisions. The Department of General Education is responsible for the administration of government secondary schools (academic and comprehensive streams), a few primary schools, still remaining with the ministry for pedagogic research purposes, kindergartens, special schools for the disadvantaged and adult education. The Department of Vocational Education is responsible for vocational education at the secondary and technical levels. The Department of Teacher Training for teacher training, the Department of Educational Techniques for research and curriculum development, technology, guidance and testing services, etc. The office of the Under-Secretary of State is a coordinating body, with the Educational Planning Division, and the Inspectorate designed to provide the necessary educational inputs for decision -making at the highest level. Moreover, the office of the Under-Secretary of State appoints provincial and regional education officers to serve as superintendents of education at the Amphur (district), Changwad (provincial) and regional levels. Under the office of the provincial and regional officers are the supervisors mostly appointed by the Department of General Education. It is not clear, even to the Changwad Education officers, what falls within the domain of their direct responsibility. An annual meeting of the regional and Changwad education officers has been held for the past three years to decide upon the matter, but has not yet been able to find any solution.

Information Flow

For analytical purposes, information flow may be classified into two major types-internal and external information. Internal information originates within the system, and external information originates from outside. Each major type again may be subdivided in terms of carriers, whether from professional, experts, or laymen, and also in terms of agencies sending messages, whether they be associations, press, members of Parliament, etc.

The Internal Information Flow

The internal information flow may be viewed as an upward or downward flow. At the school, district and provincial level, downward flow of information is the most crucial for the decision-making process. Schools, by and large, are attentive to rules and regulations from the centre. Even in matters concerning pedagogic standards, school teachers are very uncomfortable, if not centrally directed. For instance in 1975,

when the Ministry of Education launched a new curriculum at the upper secondary level, it gave more freedom to schools in experimenting with new methods in the teaching-learning process. The message was not quite grasped. School principals complained of the lack of central direction concerning, for example, criteria for expulsion of students from schools.

Channels for downward flow of information are either directed through the education officers, from the Changwad level to the district level, and to the school, or sometimes directed through to the school principals, bypassing the Changwad officers, much to their annoyance.

At the provincial level, the impact of external information may not be as singnificant as that of internal information. Public opinion at the local level has not yet surfaced as a significant factor especially in educational matters. With the possible exception of the monastic influence, which might exert pressure for more school buildings, and more access to adult evening classes, parent-groups have not yet emerged as strong pressure groups at the provincial level. Nor does the local press show much interest in educational matters.

With reference to the upward flow of information, whether it will exert a great impact or not is a debatable question, but there are increasing demands for an upward flow of information. More demands are indicated by an increasing number of reports requested by the Departments. At a recent meeting of Changwad and regional educational officers, (1-4 September 1977), complaints were made that so many statistical reports had to be submitted to the Departments every year that there was little time to do anything else. According to one resource person, there were at least 9 reports to be sent up annually. These are mainly statistical reports on school population at each level.

Statistical reports are not the only form of upward flow of information. School supervisors also send up their reports to their Departments. Moreover, the inspectors from the office of the Under-Secretary of State, in their round of visits to the provinces, will report to the Ministry. The types of information collected by the inspectors are for instances, regular school observance of daily codes of conduct, i.e. singing the national anthem, keeping the school compound clean, whether school teachers are wearing uniform, outward signs of conduct concerning loyalty towards monarchical institutions etc. 10

Other items concerning academic standards i.e. adequacy of school in terms of teaching-learning equipment, qualified teaching staff, at one time in the past were also important matters to be inspected.

Another channel for an information flow within the system is through an exchange process at meetings and seminars. Workshops are frequently organized for regional and Changwad education officers, supervisors and school principals. In 1976-77, there were at least the following meetings organized by national authorities :-

1.	Regional and provincial education Officers'Conferences	2 times
2.	Supervisors'Conferences	6 times
3.	School principals'Conferences	2 times
	Total	10 times

These are meetings called by the central administrative units, and do not include provincial and local meetings in which each province and region call for their own internal affairs. Information generated during these meetings involve two-way communications-the central administrative units publicizing the requirements and directives of the Ministry, the provincial administrators voicing their problems and complaints. Information generated upward is usually of a general character, most frequently related to personnel administration, and financial allocations. More specific information might be transmitted, in private sessions ex camera. The impact of information generated through such channels may be greater than the impact of upward information flow through inspectors' and supervisors' tours of the provinces, since the Directors-General, the Under-Secretary of State, and even the Minister can attend such meetings.

External Information

External information originates from the press and other mass-media, and institutions such as legislative bodies, ideological, or interest groups, the Family Planning Association, the Protection of the Environment group etc. During the three years of democratic government in the country (14 October 1973 - 6 October 1976), public opinion through the press and mass media was an influential factor in the decision-making processes and structures. For instance, it was long realized by the Ministry that private school fees should be raised to help improving the standard of private schools. But it was also understood that press opinion would be against such policy. Consequently, the Ministry left the issue alone. //

In the aftermath of the October 1976, the Government exerted a strong pressure on the press, putting restrictions on their freedom. Yet, when the Ministry announced the raising of school fees for some high-quality vocational schools, the public raised a hue and cry through the press, resulting in the wirhdrawal of the new proposal. At times, public opinion is in contradiction with professional standpoints. For instance, in the new elementary curriculum, to be launched, in the academic year 1978, the English language is not included as a compulsory subject. According to the professionals, who judge by research studies, the teaching of English language at the elementary level is not as useful as it should be, and more frequently, children are taught bad English, hence it would be better not to teach it at all. To the middle class laymen however, the exclusion of the English language as a compulsory subject, is detrimental to their interests. Hence, when the Ministry's position on this issue was declared, mounting volumes of protests and attacks were made from all quarters through the press. The Ministry shifted its stand somewhat but essentially stuck to its original framework.

The Structuring of Information for Decision-Making process

The Planning Division, or its equivalent in each department, is the organ for structuring information vital for the operation of a plan or project. The Educational Research Division, in the Department of Educational Techniques, is also another agency for structuring certain types of information for decision-making. Supervisors and inspectors also provide their own information. Vital information for internal feedback also goes through the Committee on Follow-up and Evaluation, headed by the Deputy-Under-Secretary of State. Monthly progress reports are sent by the Department to this Committee for scrutiny, which reports directly to the Minister.

Another innovative measure, introduced by the Minister in 1977, was the allocation of specific functions of information analysis to the Educational Research Division, which is required to report to the Directors-Generals' monthly meeting presided over by the Minister. Selection and structuring of information is done by the staff of the Division, although attempts have been made to coordinate with all departments for all available information. The impact upon the decision-making process with such supply of information is immediate.

Such is the outline of the educational information system particularly in the Ministry of Education. To understand the impact of information upon decision-making at different levels, it is necessary to focus on important issues concerning educational changes. Two case-studies are selected for analysis. In Chapter 2, a case study on the preparation of the 4th Education Development Plan is made. In Chapter 3, another case study on the curriculum changes is analyzed. Both are studied with the view to eliciting the role and impact of information upon these changes. In the final chapter, an assessment of interaction between the role of information and politics is attempted.

Chapter Two

Information and the Preparation of the 4th Education Development Plan

A case-study of the interaction between the information system and the decision-making process responsible for the preparation of the 4th Education Development Plan may help us to clarify many problems and issues involved in the study of information systems. The 4th Education Development Plan (1977-1981) was developed and worked out during the latter part of the third Education Development Plan (1972-1976). The National Education Commission is the agency responsible for the development of the Plan. Within the Ministry of Education, the Education Planning Division, in the Under-Secretary's Office, is responsible for coordinating the plans of all parts of the ministry. The Education Planning Division, however, in actual fact, does not operate on its own. Most of the plans and projects originate from the departments. Each department has its own Education Planning Division or equivalent; working out is own plans and projects. Hence, the Education Planning Division, in the Under-Secretary's Office, is at its best the coordinating agency within the Ministry, or at its worst, a mere collector of departmental plans and projects. Outside the Ministry of Education, the State University Bureau and the Ministry of Interior (Department of Local Administration) also prepare their own plans.

With such a departmental and ministerial set-up, the role of the National Education Commission is to coordinate all the departments and ministries concerned, in working out policy objectives, plans and projects for the 4th Education Development Plan.

The decision-making process and structure for the preparation of the 4th Education Development Plan was designed as follows :

The National Education Commission set up a series of committees in 1973.

1. The Planning Committee for the 4th Education Development Plan.

2. The Study and Drafting committee for the Development Plan at the Higher level.

3. The Study and Drafting committee for the Development Plan at the Secondary, Vocational, Teachers Training and ancillary levels.

4. The Study and Drafting Committee for the Development Plan at the kindergarten and primary level.

5. The Study and Drafting Committee for the Development Plan for Non-formal education.

The (overall) Planning Committee was responsible for coordinating all the sub-plans of all agencies/committees concerned. It was chaired by the Secretary-General of the National Education Commission and was composed of the Chairmen of the Study and Drafting Committees. The Study and Drafting Committees had to conduct evaluative studies of the operation of the Third Plan and make projections of the school enrollments and teachers needed, for the Fourth Development Plan and reported their findings to the Planning Committee. The Study and Drafting Committee for the Secondary, Vocational, and Teacher-Training and ancillary programmes was chaired by the Under-Secretary of State for Education, with the Director of the Education Planning Division of the Ministry of Education as the secretary. In short, the NEC acted as a coordinator while the operating Ministries or departments prepared the draft plans of their own agencies.

Such was the organizational structure for the preparation of the Education Development Plan. What information system and process was used in the preparation of the plan?

The Information System and Process

Since quantitative education planning is a scientific process, the information required for planning is largely pre-determined by the theoretical framework or approach adapted. In the Thai Context, no single approach has been adopted. Normally, planners are pragmatic and work under constraints. In planning for the third Education Development Plan, the enrollment figures at the primary level were set under the constraint of the population growth rate and pupils' progression rates. Planning for the secondary level was determined by a mixture of considerations concerning financial limits, middle-manpower requirements, and progression rates. Planning for higher levels attempted to follow closely the guidelines of manpower requirements. Above all, the plan as a whole was set under the constraint of an expanding growth rate of the economy, and the government's decision on the ratio of education expenditure to the total government budget and the gross domestic product. Theoretically, however, quantitative planning requires at least the following data :-

1. Present population growth rates and projections for the future.

2. Current G.D.P. growth rates and projections for the future.

3. Manpower requirements for different levels.

4. Rates of return to investments in different levels and types of education.

5. Student enrollments, progression rates, repeater and drop-out rates.

6. Recurrent and capital cost per head.

7. Present stock of teachers and projection of total numbers required.

In terms of qualitative planning, more data are needed in addition to the above. For instance, information about the quality of learning which takes place in the classroom, would be needed. Results of new experiments (if any) on learning efficiency would be indispensable for the design of new curriculum and classroom logistics. Information concerning regional dispartities would also be needed if equal opportunity and justice are the goals of educational development. In the preparation of the 4th Education Development Plan, inputs from the proposed changes in curriculum at the primary and the secondary levels was one of the most influential factors determining the enrollment targets and qualitative design of the plan.

Was the necessary information available for the preparation of the plan?

Some necessary data were available for the preparation of the plan, since agencies such as the National Statistical Office, the National Economic and Social Development Board, the Institute of Population Studies, have long been working in their special fields. Information on population growth rate, G.D.P. and school enrollments was available in due course. Thus, by 1976, the Institute of Population Studies published a report on the Population Projections for Thailand, (1970-2010), as one foundation for the Five Year Plan; the National Economic and Social Development Board also pulbished a report on "National Income of Thailand". The statistics on school enrollments were also available from the planning divisions of the Departments concerned, as well as from the National Statistical Office.

Another set of vital statistics-unit costs per head was also available. The problem here was that there were different ways of calculating costs per head for different levels and types of education. The secretariat of the Planning Committee however did its own calculation, and used these unit costs for setting the financial ceiling. The figures were later adjusted, after negotiations with the operating agencies.

An additional set of information which had a determining effect on the enrollment figures, originated from the proposed change of the structure of the school system from the 4-3-3-2 to the 6-3-3. The Department of Educational Techniques was responsible for curriculum development, which involved the change in the structure of the school system. The Committee for Establishing the Framework for Education Reform, organized by the NEC also proposed the change in the structure to 6-3-3. Once the proposed new system was accepted (in 1975), it had considerable effects on enrollments in the secondary grades. By 1976 the change was accepted by all concerned, and it was agreed that the new school system would commence in 1978. If that is the case, secondary schools would face the problem of double intakes, one lot from elementary school grade VII, another lot from elementary school Grade VI.[1] The planning Committee prepared for such eventuality. In the final planned target enrollments for year 1978, the old secondary grade I would have an in-take from Grade VII of about 476,080 and the new secondary grade I would have an intake from Grade VI of about 552,010.[2] The enrollment for the first grade at the secondary level was thus planned to more than double. In short the proposed change of the curriculum and schooling system produces a tremendous effect on the planned targets and required financial allocations during the 4th Development Plan.

Information : not available or if available, not accurate

Not all desirable information is available. Some might be available in the shape of general guidelines but not accurate or exact enough for instance :-

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1) If there are going to be no pupils in grade VII in 1978, pupils in grade VI will have to leave school at the beginning of 1978 or proceed on to the secondary school.

2) The 4th Education Development Plan, (1977-1981). The Office of the National Education Commission, p.49

1) Manpower requirements Although the NEC commissioned a body of experts to work out projected figures on manpower requirements, the results were not too satisfactory. According to the Director of the planning Division of the NEC, rough estimates had been made, concerning the manpower requirements at the high technical and professional levels, and these were used as general guideline. At other levels, particularly the semi-skilled level, research work still met with difficulty. More difficult still is the problem of estimating specific requirments for specific types of vocations. No statistics were available about these categories.[1]

2) The Rate of Return to Education

Although Mark Blaug had originated the research project on this subject in 1970, and his recommendations were taken into consideration in the planning of the 3rd Education Development Plan, there has been no follow-up project. Since Blaug's servey covered Bangkok-metropolitan areas, more surveys at the provincial levels are needed. However, for the 4th Education Development Plan, the rate of return approach was not adopted.

3) Social Demand and political trend

Although in the actual operation of the plan, decisions for school enrollments are often made under pressure of social demand and polities, there has not in the past been an explicit adoption of the social demand and political model approach in the planning process. In the evaluation of the achievements of the 3rd plan, what occurred was that enrollment figures for varicus levels overshot estimated targets. For instance, at the kindergarten level, the enrollment figure exceeded the estimated targets by 15.6%; at the secondary level, the enrollment figure exceeded the estimated target by 20.7% in the last two years of the plan. The actual expenditure exceeded the estimated expenditures by about 10,000 millions Baht.[2]

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1) An Interview with Mr. Sanong Sunsanayuth, Director of the Planning Division, NEC, 18 November 1977.

2) The 4th Education Development Plan, 1977-1981, NEC, Chapter I

Such phenomena indicated that data on social demand and political trends were not sufficiently considered in the planning process. However in the 4th Education Development Plan, according to the Director of the Planning Division of NEC, account had been taken of social demand, particularly at the secondary level.[1] But, it is not clear how the exact figures on social demand were worked out. Regarding political trends no information is yet available. Although the government is unstable in Thailand, the political elite does not change its composition too fast (with the exception of the last Government 1976-77), hence a general survey of the elite's opinion and attitudes concerning public education can be made.

4) Feedback Information at the Micro Level

Another type of data needed is the evaluative research data at micro level. Before a financial allocation for an individual project is made, planners need to have feedback information on the performance of individual projects, as well as their operation. For instance, in non-formal education, when the enrollment for the Mobile-Trade Training Unit project fell short of the target by 46%, the reason given for this was the shortage of teachers in technical subjects i.e. electronics.[2] Yet what we need to know is how the administrative process has been worked out, and why instructors in technical subjects are not available for the task. Reasons may lie somewhere else beside the shortage. In short, it is a kind of systematic evaluation that is needed for future planning. Feedback information from many important projects should be gathered, and these seemed to be lacking in the planning process.

5) Other vital statistics needed

As long ago as 1972, it had been pointed out by a UNESCO Planning Advisor to the Ministry of Education, that there was almost a complete lack of any data in the following fields :-

1. Institutional Unit Costs
2. Sources of finance
3. Availability of physical facilities
4. Utilization of physical facilities
5. Age and standard of existing facilities

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1) An Interview with Mr. Sanong Sunsanayuth, 18 November, 1977

2) The 4th Education Development Plan, 1977-1981, NEC p.9

6. Wastage through student dropout and repetition
7. Field of specialization of teachers.
8. Proportion of newly qualified teachers becoming teachers.[1]

Upon investigation now it is found that a research project on Cost and Utilization of Educational resources is being conducted by a research unit of the Educational Planning Division, of the Ministry of Education, and another research project by the National Education Commission on the utilization of physical facilities is near the stage of completion. A further project on the sources of finance of educational authorities is also being conducted by the Planning Division. On the other hand, no research work is being done on the fields of specilization of teachers. Instead, the Department of General Education authorized a research project on whether teachers are being utilised according to their fields of specialization or not. These research projects should have been done long before the completion of the 4th Plan. Since, they lag behind, it is hoped that they may be useful for the annual operation of the Plan, and for the preparation of operational plans.

External Information

Demographic statistics, figures of manpower requirements, and the G.D.P. growth rate may be regarded as external information (external to the education system). Public opinion on educational issues constitute another important source of external information. The National Education Commission allocated the task of screening public opinion on education issues to a section of its staff. Beside, seminars and workshops have been held with the view to structuring public and professional opinion on certain key issues such as teacher training, vocational education, and non-formal education. Voluntary interest groups such as the Family Planning Association, the Protection of the Environment Society also fed in information to produce an effect on the shaping of the plan.

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1) Nicholas Bennett, Statistics and Data Requirements for Educational Planning and Implementation, A paper presented to the Seminar on Educational Statistics held at the Ministry of Education, Bangkok (9-8 Sept. 1972)

Information from Foreign Sources

Information from foreign sources has also significantly contributed towards the build-up of technical know-how on planning. Some of the more important of these are as follows :-

1. IIEP Publications

The more basic handbooks in the series, the Fundamentals of Educational Planning, have been used and some even translated into Thai. In addition other useful publications include for instance, the Costing of Educational Plans; Cost-benefit Analysis in Educational Planning; The Analysis of Educational Costs and Expenditure; Educational Cost Analysis in Action: case studies for Planners; Financing Educational Systems : country case studies; and School Mapping Reports. These materials serve as reference for basic knowledge in planning. They have however only been studied by a very small group of people.

2. The APEID network

The National Educational Commission as an associated centre of the APEID network obviously benefits from the exchange of information among the associated members on the relevant issues of planning in the Asian context.

3. Information through Training Programmes

For the last decade, short-term training under the auspices of IIEP, INNOTECH, IDA (World Bank, ADI (Asian Development Institute), the AIAEP (Asian Institute of Administration and Educational Planning), have contributed considerably towards building up the planning staff of the Educational Planning Divisions in the Ministry of Education, and the NEC. There is no denying the impact of these training programmes upon the technicians in the Thai educational administrative system.

In addition, long-term training, though affecting only a selected few, may have long lasting influence on the planning officers who have gone through such courses. The training received is mainly in the U.S.A.

4. Information through Foreign Experts and Consultants

In the past, through the USOM project, experts and consultants from the Michigan State University had rendered their services to planning divisions in the Ministry of Education and the NEC. Unesco as well as Ford Foundation experts also had given their technical assistance to Thailand in planning. Information that these experts provided obviously helped shaping the planning process in Thailand.

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5. Information through regional and international conferences and Seminars.

Regional and international conferences and seminars are another device for mutual exchange of information. In the past, several conferences and seminars have taken place in Asia, and Europe. Officials who met at these conferences and seminars have built up unofficial inter-personal networks and this often exchange information, which may be beneficial to each others work.

In short, foreign sources of information are of several kinds and exercise influence upon building up planning capabilities of Thai planning officers in different ways. Information through these channels may not be systematic, but its effects are accumulative, and contribute towards creating a basic knowledge about Educational Planning in Thailand.

However, more directly relevant in the preparation of the 4th Plan is information from external funding agencies such as the World Bank. Its role in fixing the limits of total financial expenditure in the 4th Plan deserves some elaboration. Originally, the planning committee fixed the total expenditure at 99,360.21 millions Baht (about 3.27-4.56% of G.D.P.). The Seni's Government (1976), much subject to political demands and pressures from constituencies, cut this down to 90,000 million.[1] This affected severely many departments, but particularly small departments like that of Educational Techniques which is in the process of launching a new curriculum. The big cuts affected the in-service teachers training, which was indispensable for the successful implementation of the new curriculum. At that time, negotiations with the World Bank for a project to aid curriculum implementation had been going on. This Fifth World Bank Loan project was originally estimated to cost about 1,600 million Baht. Later, the agreed figure was reduced to 980 million Baht of which only 633 was needed during the fourth plan period. The World Bank intention had been communicated to the National Education Commission (NEC) and the National Economic Social Development Board (NESDB), by September 1976. Thus, when later on the NEC and NESDB negotiated with the Ministry of Finance, the World Bank Loan was incorpatated as part of the 4th Education Development Plan. The final figure of the total expenditure is 94,996.02 millions Baht (633,41 millions of this being the Fifth World Bank Loan Project on curriculum development and teachers' training).

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[1] An Interview of Mr. Sanong Sunsanayuth, NEC, 18 November 1977

The relationship between the Planning Committee and the Reform Group

A great deal of information which influenced the making of the 4th Education Development Plan came from the Reform group. The so-called Reform group is the informal name of the Committee for Establishing the Framework for Education Reform (CEFER), set up by the Sanya Government in June 1974. The National Education Commission was responsible for organizing this group. Thus, the Reform group and the Planning Committee were closely coordinated in terms of lines of authority. Information from the report of the CEFER did have an impact on the planning process. For instance, in working out the enrollment figures for the Government's primary schools, the Planning Committee distributed the figures between the private schools sector and government schools sector on the basis of the past ratio between these two sectors. At the time it was not yet certain how the Reform group would deal with the problem of private schools. Finally, the Reform Report recommended that the government should take up all responsibility at the elementary level, while the private sector will be increasingly discouraged at this level.[1] This decision affected the estimated financial target. Thus, in the last minute, another 2,451.68 million Bahts was allocated for the so-called Project on Reduction of Elementary Private Schools, the money being used for constructing the Government's additional schools to take over from the private efforts.[2]

Other important recommendations made by the Reform Committee such as the change in the structure of the school system to the 6-3-3, which influenced the enrollment figures in 1978 has been earlier indicated. The repeaters' rate used at the primary level, (calculated at 5% per grade per annum) is much reduced from current rates. Such a reduction was based on the assumption that according to the new elementary curriculum with semi automatic promotion[3] progression rates would be much higher than in the past.

Interaction between information process and Departmental interests

Although planning is a rational process, requiring informations for arriving at decisions, the decision-making process itself cannot be a purely rational process. With external constrainst on total financial expenditures, there simply could not be enough for everybody concerned.

1) A Report of the Committee for Establishing the Framework for Educational Reform, December 4, 1974. p.8-12 (Chapter 8, p.12)

2) An interview of Mr. Sanong Sunsanayuth, NEC, 18 November 1977

3) An interview of Mr. Kamol Sudpraserth, Director of the Test Bureau, Department of Education Techniques, 17 November 1977.

Hence, conflicts of departmental interests are inevitable. In this conflictual process, it cannot be said that interests and information are allied on opposite sides. Indeed, each party endeavors to marshal all informations to back up its request. For example, the working group of the Planning Committee originally allocated about 300 million Baht to the Department of Educational Techniques. This fell short of the departmental estimate by 1,200 million Baht. Thus, negotiation between the Department and the NEC started in late June 1976. The NEC came to appreciate the true needs of the Department through exchange of information, but the NEC could not concede to the full request of the Department, since the total allocation for education had already reached the upper limit of the ceiling set up by the Cabinet. However, the compromise was brought about by a proposed Bank loan. This instance illustrates the role information played in backing up departmental position.

Similar negotiations between operating departments and the working group of the Planning Committee also took place. Details cannot be given here. What can be said in short is that the rational process of planning is limited by political considerations. The Cabinet has a final say on the financial allocations, and in this it does not strictly observe the guidelines of the NEC. The Minister of Finance under the Seni's Cabinet (1976) at first allocated only 90,000 millions Baht to the Education Development Plan, falling short of the estimated target by almost 10,000 millions. Further negotiations raised up the figure to 94,996.02 million Bahts. Moreover, in the actual operation of the Plan, the Thanin Cabinet, much concerned with security and defence, cuts drastically the public expenditure on social services. For instance, according to the Education Development Plan, the Department of Educational Techniques should have been allocated about 70.95 millions Bahts in 1976/77 instead it got only 48 millions. The Minister of Education, on the threshold of power in November 1976 rejected the indispensable World Bank Loan Project, thus depriving the Department, and indeed the Ministry, of another 633.41 million Bahts. This project centred on materials production and distribution, and on in-service training for the new curriculum. To rescue the hopeless situation, an amendment to the Budgetary Bill of 1978 was made, resulting in an allocation of 25 millions Baht for in-service training, which obviously fell short of the estimated figures for the total project of 633.41 million Baht, or about 150 million Baht in 1976/77. The case illustrates the primacy of policies in the education planning process and its operation.

In conclusion, from the case study on the preparation of the 4th Educational Development Plan, the following observations may be made.

1. The 4th Educational Development Plan belongs to a later stage of development than the 3rd Educational Development Plan, and thus, professional planners at technical levels were more prepared than their predecessors. Basic statistics on enrollment figures, were more up to date (usually one year behind the calender year, i.e. the statistics for 1976 are available by 1977). In addition, the preparation of the 4th Educational Development Plan coincided in time with the deliberation of the reform group (extending from June 1974 to 1976), thus relevant data generated by the latter were useful and beneficial to the 4th Plan. Apart from that, the preparation of the 4th Plan still had to contend with a lack of some necessary data. For example, data on manpower requirements were not adequate. Rates of return to education were not further explored. Social demand was often assumed to be unimportant. Feedback information on many important projects were not systematic. In addition, some essential statistics on financial sources, utilization of physical facilities, and fields of specialization of teachers, as pointed out by the Planning Advisor for the 3rd Plan were not available for the preparation of the 4th Plan. Such a state of affairs, although indicating the problems of research and data availability reflects really the lack of an acceptable, comprehensive conceptual framework for educational planning. This is not to say that as individuals, planners do not have their own conceptual framework for working out their own plan. What is implied is that when men act as a collective body, in an institution, they may lack an acceptable comprehensive framework. For such a framework, we need to specify an exact relationship between the economy, politics, society and education. In a developed economy, the task may not be too difficult, but in a developing economy have we arrived at a model of planned change? Because of such a glaring lack of model of planned change for a rapidly changing society, planners are not too certain about the necessary steps to follow. Hence, research work related to planning is not planned systematically and if it seems to be systematic at one period, is often discontinous because of frequent changes in leadership. And since in Thailand, for the last two-three decades, the education system is characterized by disunified decision-making structures, as well as by an unstable pattern of leadership, it is not surprising that progress is taking place by fits and starts. To realize this shortcoming is to realize that we as planners need, most of all an acceptable comprehensive conceptual framework for planning, to ensure a continous rational decision-making

amidst a world of politics-ridden changes. Such a conceptual framework should incorporate an organizational process model, a social relationship model, a cultural model and a value-maximizing choice model. Such a framework, may serve as guideline for assessing research needs and priorities, as well as for guiding policy for authorizing reasearch work.

With such a conceptual framework, the NEC, or any Planning Division should then concentrate its task and energy on research projectswhich are central for planning rather than dissipating their energy on long-term projects which are of academic interest and often not practical. For example, the NEC project on problems of educational equality, very interesting and relevant to educational administration as it is was not of direct utility in the preparation of the 4th plan at all.

Secondly, the NEC or a Planning division should attempt to organize a system whereby statistics are collected according to the needs of planners, rather than for the sake of collecting statistics. In short, the problem is how to combine planning needs and statistical collection in one on-going system.

Thirdly, to utilize more fully external sources of information, there is a need for a system whereby these informations are collected, classified, abstracted and translated into Thai and then dissiminated or directly fed into the decision-making structures. Such a network for information flows will definitely improve the efficiency of the planning process.

2. It should be observed that a systematic planned change often has to contend with polical considerations, and the more politically unstable the system is, the less predictable the annual plan and budgetary allocation becomes. What is needed to contend with such a system is to encourage information flows among key-decision makers, specifically among professional planners, top administrators, politicians, and mass media representatives. Without a true and repeated exchange of information among these groups, there is little likelihood that any drastic change or reform can ever take place in the system. Such an information exchange system has yet to be designed.

3. The decision making process and structure for planning as presently conceived is not as influential as it should be. Since the educational system is fragmented among several ministerial agencies, the National Educational Commission was inevitably needed as the coordinating planning agency. Its strength does not lie in being an external agency as sometimes supposed. Indeed, being an external agency is the source of its present weakness. Any strength which it may have should lie in the fact that it is under the Prime Minister's office; and consequently, and theoretically should be able to exert influence at the topmost decision-making levels in the cabinet. And yet, this does not occur. The Budget Bureau also under the Prime Minister's Office does not always observe the guidelines of the Development Plan. There is nothing which the NEC can do to keep in control of the game. Each department, and ministry, well familiar with such a state of affairs, tries its best to get the most it can, whether warranted by the five year plan or not. Thus the actual operation of the plan, and the theoretical plan are separate activities, exercised almost for their own sake, almost independently of each other. To make planning a real factor in the education system, requires a more drastic step in the reform of the administrative system of the Thai government. Such a task is beyond the recommendation of this paper.

Chapter Three

Information and the Curriculum Reform

The process of curriculum reform is by itself one of the most interesting cases for analysis. In this paper, our chief focus will be the interaction between informational aspect and the decision-making process. But first of all, the organizational context and the proposed reform measures should be described.

The Department of Educational Techniques is invested with authority for curriculum development. By the royal decree of 1972, and the royal decree of 1976, the Division of Curriculum Development, which became the National Curriculum Development Centre, is responsible for designing curriculum for schools of all types and levels below the tertiary level; the Division of Te t Books(which has now become the Text Book Development Centre) is responsible for producing reading materials. The present curriculum has been in use since 1960. By 1970 it was realized that a major change was needed. The Committee for Curriculum Improvement was appointed. By 1976, a new curriculum for the upper secondary curriculum was launched. By 1978, the nex elementary and secondary curriculum will start being implemented, grade by grade, until the full cycle is completed by 1983. The new curricula involves drastic changes in many important aspects. For example :-

1. The Structure of the School System

The structure of the school system will be changed, from a 4-3-3-2 system to a 6-3-3 system (6 years primary, 3 years lower secondary, and 3 years upper secondary).

2. Primary education is designed for the majority of the rural youth

More practical experiences are provided in the new curriculum. Subjects are grouped into 4 subject-areas.

- Language and Mathematics
- Life Experience
- Character Training
- Work Experience

Life experience, combining academic subjects such as social studies, natural science, and work experience are designed to serve rural needs.

Also to give more emphasis on Thai language, foreign language teaching is excluded from the compulsory curriculum. English may be taught as an optional subject in schools which are well equipped and approved by the Ministry.

3. Secondary education is designed for development of individual skills and aptitudes.

The curriculum has become more diversified, with core subject-areas, and electives. The number of hours for electives increase as one goes up to higher grades. In the electives, practical arts, work experience and vocational subjects such as agriculture, industrial arts, home economics are encouraged.

4. Examination system

The new curriculum attempts to eliminate the concept of examination as the screening device for higher echelons of the school pyramid. Education is now viewed as a developmental task. Its purpose is to develop individuals according to their innate capacity and aptitudes. All the tests, when administered, should be looked upon as formative evaluation - that is to say, helping teachers to diagnose their pupils and to improve their teaching-learning process. Thus, automatic promotion at the elementary level is encouraged, with examination only administered at Grade VI. At the upper secondary level, however, examination at the terminal grade, which before 1975 was administered by the Test Bureau, (in the Ministry of Education) delegated to the school. This practice hopefully will be followed for the lower secondary level as well. Thus, no longer would the Ministry of Education control the quality through a nationwide examination system at the terminal grade (M.S. 3&5) as formerly. The standard and quality of teaching would be controlled, supervised, and improved through other means, i.e. standardized tests periodically administered.

5. The change of philosophy and methods of teaching

The changing of the curriculum involves above all a change in philosophy and methods of teaching. At the root of this changing concept is the notion that teaching should be guided by goal-referenced criteria. Subject content

is merely a media for attaining objectives hence should be as flexible and as relevant to the environment and interests of the learners as possible. The new pedagogy thus implies the change of teaching style, and to assure effectiveness of the change, teachers' guides, as well as in-service training are needed as part and parcel of the implementation plan.

The curriculum change, just briefly described, is thus reformatory in nature, judged by the context of Thai education system. How did this come about ? What is the decision-making structure and process for designing the whole change? Who are involved in the process? What role did information systems play in the process?

The Decision-Making Structures and Process for Curriculum Change

Although the Department of Educational Techniques is responsible for curriculum development, it was earlier realized that no drastic change in curriculum matters could be made without involvement and participation of other departments and agencies concerned. Inter-departmental committees at different levels were thus established. These committees were not a priori conceived, but evolved according to the changing circumstances. They could be summarized as follows:

1. At the ministerial level, the Committee for the Improvement of Curriculum (CIC) was set up by the Ministry of Education in 1970. It was composed of 9 departmental heads, 3 Supervisory Unit Chiefs from operational departments, and the Secretary-General of the National Education Commission. The Committee is invested with authority for deciding on policies, principles and structures of curriculum at both the elementary and secondary levels. The Committee was at first chaired by Mr. Bunthin Attagara, who later became the permanent Under-Secretary of State for Education, and after his retirement, it has been chaired by the permanent Under-Secretary of State for Education ex-officio
A series of Sub-committees were set up by the CIC as follows :-

1.1 Sub-Committee for Elementary Curriculum Analysis (1971).
1.2 Sub-Committee for Secondary Curriculum Analysis (1971).
1.3 Sub-Committee for Drafting Elementary Curriculum.
1.4 Sub-Committee for Drafting Secondary Curriculum (upper secondary)
1.5 Working Groups on Subject-areas (at elementary level)

- Thai Language
- Life Experience
- Character-Training
- Work-Experience

1.6 Sub-Committee for drafting Secondary Curriculum (Lower Secondary)

2. At the departmental level, two sets of committees were set up for materials development (teachers' manuals, curriculum plans, textbook; supplementary readings etc.), one set for the elementary level, another for the secondary level. The personnel were seconded from different departments, but were mostly composed of supervisors, teachers, and lecturers from university faculties. They served under the guidance of a Steering Committee, chaired by the Director-General of the Department of Educational Techniques.

2.1 At the elementary level, there are altogether four committees (or rather sub-committee) according to subject areas or groupings of experiences. (Thai-Language, life experience, character training, and work experience).

2.2 At the secondary level, there are twelve committees (or sub-committees) according to Subject-areas, i.e. Thai Language, English language, Social Studies etc.

3. At the inter-ministerial level Committee on Curriculum Contents and Process was set up in 1976 to serve as s connecting link between the Department of Educational Techniques (Ministry of Education), and the Education Reform Committee (under the National Educational Commission), It was chaired by the Director-General of the Department of Educational Techniques, but the secretariat was a joint operation between the National Curriculum Development Centre (NCDC), and the NEC.

Also at the inter-ministerial level is the Committee for Curriculum Implementation, chaired by the Deputy-Under-Secretary of State for Education, and composed of departmental heads, and representatives from external agencies concerned with education, i.e., the Ministry of Interior, the Bangkok metropolitan authority.

4. At the regional, each educational region set up its own curriculum development committee. There are 12 regional curriculum development committees for 12 educational regions. They are coordinated by the Committee for coordinating Regional Curriculum Development, headed by the Director-General of the Department of Educational Techniques.

It must be emphasized that the Committee and Sub-committees listed were not established at the same time, but at different stages in the curriculum development process. All in all, about 500 personnel have been involved (excluding the regional level). But it should also be said that these professional personnel of high and middle rank were and are not engaged on a full time basis in committee work. The Committees at a higher level of authority, for example the Committee for the Improvement of Curriculum (CIC) at the ministerial level, meets very infrequently. At one time, the CIC hardly met at all for a period of three or four months. The Sub-committees on the elementary or Secondary level met once a month on average, but when urgency required, they could meet as often as once a week. The CIC and the Sub-committees on the Elementary and Secondary Curriculum are composed of high ranking senior civil servants. Workshops on the development of curriculum materials, however, are normally of long duration. The members were recruited from supervisors and school teachers of middle-rank, and they work three or four days a week for a period of about four months a year. Since the members of these committees and workshop came from different government agencies within the Ministry or outside, and they often have different perspectives regarding curriculum development, thus, much precious time is spent on searching for a common frame of reference.

How effective is the authority vested in these Committees at different levels?

At the ministerial level, the Committee for the Improvment of Curriculum, is vested with authority for the final approval of the curriculum at the secondary and elementary levels. However, since, the permanent Under-Secretary of State for Education, or the Minister, is required to put his signature to a ministeral decree, regulation, or directive, the formal approval of curriculum policies still belongs to the head of the Ministry. In practice, since the permanent Under-Secretary of State for Education is the Chairman of the CIC, the final approval of the CIC might be regarded as decisive.

At the departmental level, which is concerned more with the detailed operation of curriculum development, the Department of Educational Techniques theoretically has the final say. However, since the implementation of the new curriculum involves the departments which control schools, i.e. the Department of General Education, the Department of Local Administration (MOI), their opinions carry weight

on the issue of timing for implementation. Moreover, the National Education Commission which is responsible for coordinating the planning for education reform, is also concerned with the timing for curriculum implementation. Since, each agency concerned had its own view about the timing as well as about the methods, several meetings had to be called for negotiations. Finally, with the spirit of give and take, a decision was arrived at in 1976 that the implementation of curriculum change would begin in the academic year 1978, at grade I primary, and grade I, secondary.

The decision-making structure and process by a series of committees at different levels, cumbersome though it may be has proved its merit in the departmental crisis during 1977. The Minister of Education under Mr. Thanin Kraivichien's Cabinet has his own view on the issue of timing and manner of implementation. He insisted on the implementation of new curriculum at grade I, II, III, at the elementary level at the same time in 1978. The Committee for Curriculum Implementation, on the other hand, maintained the policy previously arrived at and the conflict nearly brought aobut the resignation of the Deputy Director-General of the Department of Educational Techniques. However, the Minister finally made a retreat. This incident demonstrates the influence of inter-ministerial committees as the steady rock of policy-making, in the context of frequent ministerial changes.

The Role of Information in Curriculum Development

I Channels of Information

The Ministry of Education has created channels of information for curriculum change and development through the following means:

1. Specific research work
2. Conference, Seminars, and Workshops
3. Committees and working groups.
4. Linkage between the Department of Educational Techniques and regions through follow-up and evaluation.

Researchwork, authorized by the Ministry of Education, and used by the members of the committees in their deliberation on curriculum matters are the following :-

1. Follow-up studies by Supervisory Units, and the Division of Elementary Education, Department of General Education.

2. Research on lower elementary curriculum by the Department of General Education and the International Institute for Child studies (1963-5). Published in 1966.

3. Achievement Scores of the first Grade Pupils, as compared with the Curriculum Objectives. Department of General Education, 1968 (part I).

4. A General Survey of Functional Literacy of School-Leavers (after the 4th grade). Department of General Education, 1969.

5. Achievement Score of the first Grade Pupils, as compared with the Curriculum Objectives. Department of General Education (part II) 1970.

6. Effectiveness of the State Provision for Compulsory Education, Department of General Education, 1974.

7. Survey of the Vocabulary of Beginners (1964), Educational Research Division, Department of Educational Techniques.

8. Survey of the Learning Needs of the Rural Population in 1975, Conducted by the Division of Curriculum Development, Department of Educational Techniques.

9. A series of Lectures on Theories & Approaches of Curriculum Development, organized by the Division of Curriculum Development in 1973 (involving Thai and Foreign Lecturers).

10. Time Wastage During the Academic Year, of Schools in Thailand, by Mr. Maitri Thunchai, et at (1964).

11. Thoughts on Teaching English Language at the Upper Elementary Level, by Mrs. Parninee Sakrig in periodical of the Faculty of Faculty of Education Chulalongkorn University September, 1971, p. 44-82.

12. "Proposals for Improvement of English Instruction in Thailand" January 1, 1971, by Central Institute for English Language Study.

13. Studies of the structure of elementary and secondary curricula in other countries through frequent study tours, experts and documents provided by bilaterial and multilateral organisations.

2. Conferences, Siminars, and Workshop

Conference, Seminars, and Workshop of recent date, which were organized by the Ministry of Education, and which might be regarded as related to the process of curriculum development from the perspective of gathering of information and opinions from different authorities are as follows :

1. A Seminar on the New Face of Elementary Education at Wang Kaew (1973).

2. A Workshop on the Elementary Curriculum at Wang Ta-Krai (1974).

3. A Seminar on Education for the Masses at Songkla (4-7 August, 1974).

4. A Conference on Regional Curriculum Development at Bangkok (1975).

5. A Conference on Regional Curriculum Development at Bangsaen (1976).

6. A Seminar on Curriculum Content and Process at Bangsaen (March 1974).

These conferences, seminars, and workshops were organized with different objectives. The seminar on the New Face of Elementary Education at Wang Kaew, in 1973 was a brainstorming session among selected few experts on general issues of elementary education. The workshop on Elementary Curriculum at Wang Ta-Krai was a technical meeting of curriculum specialists working out details of the structure of the new curriculum. The Seminar on Education for the Masses at Songkla, was really the most significant in terms of bringing together people with dramatically different views on education, from those ranging on the right to those on the left of the political spectrum, from high-ranking personnel in the Ministries and government agencies, and private sections, to the representatives from the labour groups, students activist groups, the mass media, householders, farmers, and hilltribe people. All in all, about a hundred people with different perspectives participated at this seminar. Moreover, questions and comments by layman from all walks of life sent through to the mass media spokesmen were brought into considerations in the final report of the seminar.

The bottom-up information flow went through such channels as the conference on regional curriculum development; whereas the horizontal information flow between the Ministry of Education and the National Education Commission and the Reform Committee group went through the Seminar on Curriculum Contents and Process.

3. Committees and Working Group

Committees and working groups established by the Ministry are another channel for information flow among professionals on curriculum matters. As indicated earlier, about 40 committees and working groups have been in operation, involving about 500 people including supervisors, school teachers, university faculty instructors, professionals from the private sector, and officials from the Department of Educational Techniques.

4. Information flows between the Department of Educational Techniques and schools was also created through follow-up and official visits. In 1975, the Director-General of the Department made a tour of the regions, in which a general exchange of opinion took place between departmental officials, the regional and changwad education officers and school staff.

By 1976, when the new curriculum was being tried-out in 25 pilot schools, in the provinces, evaluation sheets and reports were required from the regional supervisors who chaperoned the pilot schools. The follow-up teams from the Department also made regular visits to the schools and collected reports, as well as observing the try-out and conducting interview with teachers themselves.

5. Foreign Information Sources

In the process of curriculum development, contact with foreign countries has also brought about some benefits to the planning of the change. With the benefits of the IDA (World Bank Loan) project, short-term fellowships enabled a number of key personnel from the Curriculum Development Centre (CDC) to make study tours of the Educational Development Centre in USA, the Curriculum Development Centre in Israel, the Open University and open school system in U.K., the KEDI in Korea, the Curriculum Centres in Sri-Lanka, Malaysia and the Philippines, and the NIER in Japan. Information gathered from these sources enhanced the perception, understanding and insight of key decision-makers at the CDC. Texts and sample of curriculum materials from these external sources have been used for informal in-service training of the CDC staff, and others joining the curriculum development teams.

In the longer run, long-term training courses have been given to CDC staff, who are now being trained in the USA, Australia, and U.K., under the grants in the IDA project, Most of these trainees have not yet returned to Thailand, hence cannot yet contribute to the present curriculum change. However, their contributions would affect the second cycle of curriculum development, which would have to follow the present cycle almost immediately.

II Structuring of Information

Structuring of information for curriculum development took place at 4 stages.

1. First stage Information, concerning education inputs, products, and learning processes, were first structured through research work.

2. Second stage Research findings as well as recommendations were generally discussed at seminars, conferences, and workshops, and structured in terms of directives for change.

3. Third stage Both research findings and recommendations from seminars, and conferences were selected by the committees and groups for drafting the structure and content of the new curriculum, and the new materials accompanying them. There are in fact two sub-stages of the committee work. The first stage of committee work is concerned with drafting a general framework for the curriculum; the second stage is concerned with curriculum materials development.

4. Fourth stage After the first trial of the new elementary curriculum, formative evaluation was conducted, whose findings went into the final production of the prototype materials.

III The Impact of Information on Curriculum Change and Development

There is no denying that information has impact on curriculum change and development. The question is how much and in what manner. It may not be impossible to construct a fine instrument for measuring the impact of information on specific issues. However, since curriculum development embraces so many issues, it will not be possible to consider them all. In this report, a few salient issues will be considered.

1. The 6-3-3 System

The present structure of the school system is 4-3-3-2, that is to say, 4 years lower elementary, 3 years upper elementary, 3 years lower secondary, and 2 years upper secondary. The new system of 6-3-3 although taking the same 12 years to complete the cycle, is split up differently with 6 years of elementary (in one cycle) and 3 years lower secondary, and 3 years upper secondary. The difference between the two systems of course is not just in physical appearance, but involves substantial changes. In the 4-3 elementary schooling system, only 60% of those finishing the lower 4 years level could get places in the upper elementary level. Thus, in fact, the 7 years compulsory education for all (according to the Karachi Plan) remained a paper target, not actually carried out.

The new 6 years elementary system, however, means compulsory 6 years of education for all. There will not be a sharp break between the 4th and 5 th years. At the secondary level, the difference between the 3-2 and the 3-3 systems is obvious, the latter cycle is one year longer, hence might be used for more specialization in subject-matter. The issue we are concerned with is what caused an adoption of the 6-3-3 system.

In actuality, decision-makers at the sub-committee level considered the elementary and secondary schooling systems separately. The Sub-committee on the elementary curriculum treated elementary education as a separate issue. The committee members decided to adopt the 6 years elementary system sometime in 1974. An interview of the key decision-makers revealed that the preference for the 6 years elementary system was based on four grounds. First, according to research findings, parts of the curriculum content of the 1960 curriculum were repetitive, parts were inessential and superfluous, thus, could be left out and systematized such that it would take only 6 years instead of 7 years of schooling to complete. Secondly, according to another research finding, although 180 teaching days per annum were presecribed by the regulations a wastage of 35% of time occured through misuse of school days for other purposes. It was futher pointed out that if the school days were extended to 200 days per annum, (the average figure for most Asian contries according to a UNESCO report), the 6 years elementary cycle could prove to be more efficacious and more cost-effective than the present 4-3 system. Thirdly, according to a report on financial analysis, the financial burden for implementing the 7 years elementary system is too much to bear. By reducing the compulsory system to the 6 years cycle, there is a better chance of implementing the universal 6 years elementary education by 1983. Fourthly, the breaking up of the schooling system into 6-6 is thought to be more in accord with stages of child development than 7-5, assuming children to enter school at 6 years old. An experiment at Chulalongkorn Demonstration School, in which the 7th grade children (13 years old) were transferred from the elementary school compound to the secondary school compound proved quite satisfactory.[1] These reasonings were shared by committee members. Thus, by 1975, the Committee for the Improvement of Curriculum approved the 6 year elementary system. In evaluating the impact of information on

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1) An Interview with Dr. Ekavidya Na-Thalang, Deputy Director-General of the Department of General Education, who served as a Deputy-Chairman of the Sub-Committee on Elementary Curriculum, 14 September, 1977.

this issue, it can be said that research findings from the Report on Lower Elementary Education, the report-from a study on Time Wastage during the academic year 1963 of schools in Thailand, by Maitri Thumchai et al., the report on the effectiveness of the State provision for compulsory education 1972, Nicholas Bennett's papers and report on the Problems of Financing the Thai Educational System, UNESCO's report on the First level of Education in Asian Region, theories of child development, and experiment from the Chulalongkorn Demonstration Schools, and reports of the Sub-committee on the Analysis of the Elementary Curriculum, all had an impact on the new proposed change of the schooling system.

At the time when the Sub-committee on the Elementary Curriculum decided to adopt the 6 years system, in 1974, the Sub-committee on the Secondary Curriculum had not yet thought out the secondary system. What they did was to focus only on the upper secondary system. By the end of 1974, it was decided that the old upper secondary system with two streams, one academic stream of two years (Sub-divided into scientific, arts, and general branches), and another vocational stream of three years, should be replaced by credit system of multi-subject streams, with four semesters course work or two years, (compulsory core subjects and electives). In other words, by the end of 1974, the Sub-committee on the Secondary Curriculum had not yet adopted the 3-3 secondary system. In the academic year 1975, the new upper secondary system was launched. What caused the Sub-committee on the Secondary Curriculum to adopt the 3-3 system is a mixture of motives, chief of which was the recommendation of the Committee for Establishing the Framework for Education Reform.

2. At the elementary level the grouping of subject matter into four integrated areas i.e., skill subjects, life experience, character training, work experience, was influenced by a number of factors.

First it was found out by the Sub-committee on Analysis of the Elementary Curriculum that the contents and process of the existing curriculum (1960) did not give enough emphasis on the affective demain. Thus, the Sub-committee on the Elementary Curriculum decided to separate this area for emphasis, and called it "Character Training", or more fully "Learning activities to promote character and personalities". The emphasis would be on activities, rather than on acquisition of knowledge concerning moral values. In short, the Sub-committees decision-making on this issue was influenced by the finding of the Sub-committee for Analysis, which was based on research findings from the Department of General Education.

Secondly, the grouping of social studies and natural science into the integrated area of life experience, with emphasis on problem-solving, and interest-focus approach or the so-called integration approach, was finally adopted as a result of deliberation at the Wang Ta-Krai Seminar, 1974. The influences for such decision might be traced to general research findings that children in the past learnt science and social studies through rote memorization, and did poorly in the examination. The integration approach was adopted with the view to encouraging children to learn from interests relating to their environment.

Thirdly, work experience is a new area gaining interest. The Sub-committee for Analysis, and previous research findings did not directly give consideration to work experience. However, by 1973 ideas were abroad that learning through practical experience could be as effective or even more so than through conventional academic methods. Learning to Be, which was published by UNESCO in 1972, became much talked about in 1973, and in it, practical experience was highly lauded as a worthy object of education. At the Seminar at Wang Kaew in May 1973, on the New Face of the Elementary Education, it was also pointed out by one of the key-note speakers that education for the rural youth should give strong emphasis on work experience, and less on academic subjects. What the participants could commonly subscribe to was the idea that curriculum should be made flexible, and more responsive to local needs. In the period after the great students' uprising, of October 14, 1973, the students movement called for a new curriculum to be as responsive to local needs as it could be. Thus, by April 1974, when the Seminar on the elementary curriculum was held at Wang Ta-Krai, the participants agreed to single out work experience as a separate area, once they had been reassured by the chairman that such a subject at the elementary level had been introduced in the curriculum of some eastern European countries.[1]

The organization of the elementary curriculum into four subject-areas remains intact, with the approval of the Committee for the Implementation of the Curriculum in 1975. However, since the adoption by the Sub-Committee

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1) An Interview with Mr. Samarn Sangmahli, the Chairman, subsequently reveals that he himself had conceived of work experience as long ago as in 1968 as a result of his official visit to Japan and his participation at a Social Action Workshop. His subsequent tour of Communist countries confirmed the nation that a work habit through wish experience could be a more effective method than academic teaching.
(An Interview with Mr. Samarn Sangmahli, Deputy Under-Secretary of State for Education, on 15 November, 1977).

of Elementary Curriculum of such framework (6 years circle, and four subject areas) just before the setting up of the Committee for Establishing the Framework for Education Reform (the Education Reform Group), it could indeed be said that the curriculum development work under the responsibility of the Department of Educational Techniques exercised an influence upon the work of the Reform Group (external to the Ministry).

3. At the elementary level, the new curriculum is characterized by learning objectives and learning concepts. The detailed specification of learning objectives and concepts is largely influenced by a new approach in curriculum development which is giving emphasis on goal-referenced curriculum. Research findings from the actual practice of the existing curriculum also mentioned that the objectives of the existing curriculum were too general and vague, without a breakdown by grade. Teachers could not find any guideline for classroom practice. To improve upon this situation, coupled with an understanding of new learning theories (that learning is a change of behavior) behavioral objectives become a new set of guideline for the curriculum.

As a result of research work by the International Institute for Child Studies, on cognitive learning, it was found out that conceptual learning was more effective than factual learning. Thus, the working group on the curriculum decided to incorporate concepts as another set of guidelines on the new curriculum.

4. The new elementary curriculum gives an emphasis on the teaching of Thai language, and excludes English language from compulsory curriculum. Thai language as the mother tongue is given priority during earlier years. The approach adopted is a mixture of the word/sentence method and the spelling methods.

An interview with the key decision-makers at the Sub-committee level indicated that the spelling method was an essential element for teaching Thai language, at the same time, experimental research showed that the word/sentence method (gestalt approach) helped to speed up reading capability. A balance between these two methods is the approach adopted.[1]

The exclusion of a foreign language from the syllabus was based on research findings that the teaching of English language in Thai schools was ineffective; most teachers were not proficient in English. Other research

1) An interview with Mrs. Chaweewan Chungchareon, Supervisor of the Teachers Training Department, 12 November, 1977.

findings showed that no significant difference existed in the final achievement between those who started learning at the lower elementary level and those who started learning at the upper elementary level.[1] The Sub-committee thus agreed to exclude English from the regular syllabus, with the hope that more time would be available for Thai language and work experience which would be useful for the majority of children in the rural parts of the country. However, to maintain the flexibity principle, the Sub-committee on the Elementary Curriculum did not entirely prohibit the teaching of foreign language, but treated it as an optional subject which may be taught as part of life/work experiences integrated areas.

The policy on English language just decribed was based on professional opinions and research work. Public opinion however might be different, and their reaction against the Ministerial policy was strong, as already indicated in chapter one.

5. The Changing Concept of Examinations

At the upper secondary level, the change is drastic, for whereas, before, a final examination was administered by the Ministry to all students at the terminal grades of the upper secondary level, the new regulation of 1975 gives responsibility for examinations to schools themselves.

At the elementary level, as presently contemplated, a semi-automatic promotion will be instituted, with a final examination for the terminal Grade VI, still controlled by the Ministry. By a semi-automatic promotion is meant automatic promotion between Grade I and II, III and IV, with examinations or tests set by schools themselves at Grade II, and IV. In addition, the new curriculum encourages teachers to apply tests as instruments for diagnostic and formative evaluation throughout the school year. The principle behind such change is to give more emphasis to testing as part and parcel of teaching-learning process, and to reduce its importance as a secreening device. At the same time, it is not yet possible to do without a standard final examination at the terminal grade of the elementary schools owing to well founded apprehension that parents may think the Ministry is neglecting its responsibility.

1) Mr. Kramol Sudprasert's researchwork in 1968

Influences for the more drastic changes at the upper secondary level, and the more gradual change at the elementary level emanate from different sources.

When the new upper secondary curriculum was launched at the beginning of 1975, the climate of opinion (professional and political) was in a state of flux, in which new ideas and experiments were abroad. An equivalent of a de-schooling movement à la Ivan Illich type could be seen in embryonic form. Both the Education Reform group and the students'movement were vehement in their attack on the educational system as a diploma-mill system, in which certificates were worshipped, and viewed the examination system as an instrument for class-stratification. Among the important publications of the students movement is the book, entitled "Education for the Mass", which includes Nyrere's speech on the Education for Self Reliance, and Mr. Seksal Prasertkul's and Mr. Nicholas Bennett's articles. The professionals and the policy-makers in the Ministry, however, did not have to come into contact with such a publication directly to realize the faults of the system as pointed out by Nyrere or Ivan Illich. On the other hand, the delegation of examination authority to the school was made on two grounds. First, the new curriculum involved a credit system in which students could take up electives according to their choices, and as such, a standard examination by the Ministry would be inappropriate. Secondly, it was felt that examinations should be treated as part and parcel of the teaching-learning process, and accordingly school teachers should use the tests as instrument for diagonostic and formative evluation purposes; and should be reponsible for all examniations.

At the elementary level, the evaluative system as presently conceived, emanate from various sources of influence. A Report of the Seminar on Problems of Repeaters in Elementary Schools (1966), and an experiment on automatic promotion carried out by the Department of General Education suggested that semi-automatic promotion was possible. This system would go hand in hand with the curriculum design which provides for formative test of behavioral or learning objectives throughout the year. The Ministry now insists on the final examination at the terminal Grade VI by the Ministry, partly from the professional concern that school teachers may not be ready to enjoy full freedom in their instructional responsibilities, and partly from a certain apprehension that parents might misconstrue the policy of the Ministry as one of neglecting "national standards". If the new elementary curriculum were launched in 1975 in the heyday of liberal politics, the Ministry might have reacted differently.

6. The Lower Secondary Curriculum

Apart from the upper Secondary Curriculum of 1975 which was really completed before the publication of the report of the Committee for Establishing the Framework for Educational Reform ; the working out of the lower secondary curriculum was guided considerably by the recommendations of the reform report. The principles of the new lower secondary curriculum which incorporates the terminal principle as well as the continuing principle of education; the potential development of individual according for their own aptitudes and interests; the adaptation of curriculum content to suit local needs; are in line with the recommodations of the reform report. On the other hand, the organization of the curriculum structure does not follow exactly the scheme envisaged by the reports. According to the reform report, there should be 3 groups of subjects.

1. Compulsory Subjects, including languages, social studies, science, mathematics, ethics, art, music, physical education etc.

2. Optional Subjects, which are divided into three groups:
   2.1 Group A, academic subjects
   2.2 Group B, practical subjects
   2.3 Group C, subjects complementary to groups A or B

3. Free Electives including Subjects, which are functional and complementary to both compulsory and optional subjects.

However, the curriculum contents and structure of the new lower secondary syllabus specify only two types of subjects.

1. Compulsory Subjects which include Thai language, science, mathematics (up to grade 2), social studies, physical education and health, arts, so-called extra-curricula activities, and work experience.

2. Free Electives including a foreign language, physical education, arts, and vocational subjects for Grade 7 and 8, and Thai language a second foreign language, and mathematics for Grade 9.

The proportion of time allocated to the compulsory subjects as a ratio to free electives is just under 5 to 1 for Grade 7 and 8, and just under 2 to 1 in Grade 9. Thus, in fact students cannot really choose much during the first two grades. On the other hand, the new curriculum leans heavily on the compulsory principle, with a liberal interpretation to include practical subjects such as arts and work experience; in which household care and chores, needle work, home economics, agriculture and household mechanics are offered as optional subject-areas within the compulsory core.

In short, the lower secondary curriculum follows the general guidelines of the report of the reform committee in so far as general principles are concerned, but works out its own structure, and considerably limits the principle of freedom of choice envisaged by the reform group.

From the foregoing discussion of the role of research and information on the process of curriculum development, it may be said in general that, where general principles and concepts are concerned, decision-making on curriculum matters is a rational process, influenced largely by research work and professional opinions. In terms of detailed operation which has not been given consideration at this level of analysis, a number of constraints may be at work, chief of which may be personal interests, physical limitations concerning school facilities and personnel, and specialised thinking.

A critique on the system and process of curriculum development.

The system and process of curriculum development, impressive as it may be, is not as systematic as it should be. Considering that this is the first real attempt at treating curriculum development as a participatory process, the achievements are impressive. On hindsight, however, much remains to be said and done.

At the general conceptual level, the committee approach plus the seminars and workshop mechanism seem to be the most appropriate, since participation and involvement of a large number of key decision-makers ensure the acceptability of the new principles and concepts. However, at the more technical level i.e. materials development, a lack of permanent staff of professional competence at the National Curriculum Development Centre became a real problem. Resort had to be made to various measures such as seconding professional personnel from different agencies, to substitute for departmental shortcomings, created problems as much as solving them. The professionals recruited on a short-term basis came

from different agencies and worked with different assumptions and motives. Friction thus become a normal state of affairs, requiring continuous compromises. Thus, it was not easy to keep the teams together and get work done according to the schedule. But more important still, it was not easy to avoid inconsistency and contradictions in the work produced, since so many viewpoints were demanding attention and verbalizations. Such a situation reflected the unpreparedness of the National Curriculum Development Centre for undertaking such a great innovative task in curriculum change. The National Curriculum Development Centre evolved from the Division of Curriculum Development which originated in 1972. The staff were few and had little experience. Their weaknesses in fact could have been overcome if the top leadership at the Ministerial level exercised a real leadership role and function, in giving support. This support was not forth coming. Negotiation with the civil service commission for additional posts went on for a number of years from 1973, but met with failure through a lack of high level support. However, the unpreparedness in terms of personnel was only part of the picture. The Department of Educational Techniques for a period of more than ten years up until 1975, did not prepare for the curriculum development task by undertaking any significant research work on pedagogic matters. Thus, this first cycle of curriculum development had to contend with a lack of research data on many essential issues.

As Nicholas Bennett has pointed out elsewhere that at least 18 topics or areas needed to be researched for effective curriculum development i.e. the effectiveness of various new educational techniques, what approaches are likely to lead to the development of general problem solving abilities etc. none of these were carried out in time.[1] With the lack of a systematic information flow, the curriculum development process depends more on personal interaction, and the words of authoritative specialists who may have conducted their own research work elsewhere in the past.

To improve upon this situation, the Educational Research Division, should play its role more effectively in the future in assisting in curriculum development. For these purposes, two things can be done. First, the Educational Research Division should concentrate on extracting information from relevant research work, carried out in and out of the

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1) Nicholas Bennett, Curriculum Transformation for Rural, and National Development. Some Basic Issues, the Division of Educational Research, Department of Educational Techniques, 1976 (Report of the Symposium on Educational Research, Past and Present).

country, classifying them, abstracting them, then feeding relevant data to key decision-makers at the various stages of curriculum development. To enable the Research Division to do its job properly, the curriculum team should make a point of involving the researchers at every stage of the game.

In addition, but more importantly, since research activities are rather unco-ordinated activities and many research works are not particularly relevant to the real tasks, the Research Division, as the only division in the Ministry, vested with research responsibility, should play its role more effectly as a coordinator of research activities within the Ministry and outside. To enable the Research Division to play this role, more effective authority in the financial allocation to different research activities and projects should be given to the Division. With such a bargaining power, the Division should then be able to guide research activities to serve the needs of curriculum development in the future.

Conclusion

In conclusion it may be said that the structure and process of decision-making for curriculum development is a broadening participatory structure, both horizontally and vertically. The process itself insofar as it concerns the conceptual and material development and implementation process is a rational and well-informed process. However in the preparatory stage (during 1970-3), more related research works should have been done. Since they had not been done, the development process at a later stage had to depend more on personal interaction and expertise. On the other hand, the workshop techniques, seminars of different kinds, regional conferences and workshops have produced desirable results in ensuring that a number of key decision-makers at various levels have been involved and become part of the development process, thus ensuring continuity of the change. In short, a lack of systematic information on the one hand is compensated by a widening circle of curriculum developers who increasingly share the common concern and are aware of the true significance of curriculum development which is a never-ending enterprise.

Chapter Four
Conclusion

In this paper, attempts have been made to study the general framework of information systems within the Ministry of Education, and to assess availability and use of information for decision-making in the cases of planning and curriculum development, as well as identifying the problems concerning the information system. In the process, decision-making structures have been described, as well as the interaction between these structures and the information process.

To recapitulate, in Chapter One the information system within the Ministry of Education has been analyzed in terms of :

1) Sources of information, internal or external.
2) Carriers of information, whether professional, expert, or laymen.
3) Information flows both upward flows and downward flows.
4) Methods of structuring of information.
5) Impact of information, or interaction between the information system and the decision-making process.

In this analytical framework, it has been observed that downward flows of information is regarded as very indispensable for the smooth operation of the system. Provincial education officers, as well as school principals demand exact directives from the central departments with regard to manners of operation of their functions. Upward flows of information are also increasingly demanded by the central departments. Problems exist concerning progress reports which do not often reach the department in time. The structuring of information is done through various processes, from research by the Division of Educational Research, and research sections attached to other departments, and general statistical surveys by the Educational Planning Division, in the office of the Under-Secretary of State for Education, and other Planning Divisions attached to various operating departments as well as through supervisors'and inspectors'official visits to the provinces, and through conferences and seminars. In 1977, Dr. Pinyo, then the Minister of Education, initiated a process whereby the Educational Research Division functioned as a feeder of vital information at the monthly Directors-General meeting. If this process continues, interaction between information flows and the top decision-making structure will lead to a more efficient decision-making process.

With reference to sources of information, external information does not have much impact on the grass-roots decision-making process. Parents' groups and provincial mass media have not yet developed too keen an interest on educational matters. On the other hand, external information in terms of press opinion, does have an impact on ministerial decision-making. For example, public opinion through the press on the issue of private school fees and the teaching of English language at the primary school level did act as external constraints on policy-making.

The role of foreign sources of information has had an impact in the fields of educational planning and curriculum development. To improve the efficiency of the information flows in this respect, a system is needed whereby foreign information are collected, classified, translated or extracted, then disseminated through the decision-making channels.

In Chapter Two, an analysis of the process of educational development planning for the period 1977-81 serves to illustrate the decision-making structure involving different ministries or agencies concerned with formal and non-formal education. In this analysis, data essential for planning have been pointed out in terms of their availability or non-availability, as well as their impact on decision-making. It has been observed that the lack of essential data is due to an unsystematic process which in turn is due to the lack of a comprehensive conceptual framework for planning. With frequent changes of leadership at all levels, an acceptable conceptual framework can serve as a bedrock of research policy.

It has also been pointed out that external information had an important role to play in the educational planning process. Indeed, since educational planning is part of overall societal planning, data from external sources, i.e. from the economy, the society, and the political infrastructure are the most essential for systematic planning. Yet, such data are not forth coming in consumable forms. However, data generated by the reform group were also influential to the final outcome of the 4th Plan. An external foreign source such as the World Bank also had its role to play specifically in the interaction between the Planning Committee under the NEC and the Department of Educational Techniques. The evaluation of the World Bank appraisal team on the scope and functions of the Department of Educational Techniques in terms of curriculum development and implementation did support the position of the Department in terms of increased financial allocations.

It has been observed that in the interaction process among key decision-makers, politics did play a significant role in planning. With a frequent turnover of the top political leadership (during the period 1973-77), policy-making at the top level is subject to frequent changes of direction, and hence planned targets suffer in the process. The case described in chapter two illustrates the gap of understanding between the political elite and the professional bureaucrats, or in other words, the lack of an adequate information flow between the professional and the laymen, including the political public.

In chapter three, an analysis of the curriculum development process illustrates the participatory decision-making process in pedagogic matters, which involved about 40 committees and working groups and about 500 people from different ranks and agencies. Such a system has its strength and weaknesses. Its strength lies in the fact that through participation, members of the curriculum teams are learning about curriculum development by doing it. The process ensures its survival and growth. The committee system does serve as a fortress against whimsical notions of political deadership in the crisis year of 1977. Its weakness lies in the fact that the committee process is time-consuming, often ineffective, and at time leading to contradictions in the contents of learning materials.

The case study, on curriculum development while pointing out the impact of information, both internal and external, upon various key issues of curriculum structure, indicates that there is a need for sysmatic information flows into the curriculum development process. The greater the number of people involved in the process, the more we need systematic informatic flows. In the present cycle of curriculum change, much research work needs to be done in drafting learning materials. The Department did not make sufficient preparation in the early stage, and research teams have not been closely involved from the beginning. It is expected that the lesson will be learnt, and in future the process will be more systematic.

Finally, since a gap of understanding still exists between laymen, including politicians, and the professionals on important aspects of the new curriculum, there is a need to bridge the gap through frequent press conferences and seminars in which mass media representatives are actively involved. Such a system of information flows through personal interaction will be an effective instrument for bridging the above mentioned gap.

This point is most important. Without cooperation and deep understanding by mass media representatives, and through them, the parents, the objectives of new curriculum will never be achieved. In the long run, the Ministry will resort to compromise and retreat, since few top bureaucrats have the courage of conviction in confrontation with public outcries. This has been proved true in the past, and there is no reason why it will not be proved true again in the future.